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Missoula County

PRELIMINARY ENVIRONMENTAL REVIEW

State of Montana

Department of Highways

in cooperation with

Corps of Engineers
U.S. Soil Conservation Service,
U.S. Department of Interior,
U.S. Fish and Wildlife Service,
Montana Department of Fish, Wildlife and Parks

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Submitted By:

Stephen C. Kologi
Montana Department of Highways
Preconstruction Bureau

Date April 23, 1984

[redacted]

[redacted]

SUMMARY

This Preliminary Environmental Review is a supplement to a PER made available August 9, 1983. This review is in compliance and conformance with the rules of the Montana Environmental Policy Act.

This review addresses the environmental impacts related to the reconstruction of a section of U.S. 93 beginning near the intersection of Interstate 90 and U.S. 93 at the Desmet Interchange, and extends northerly for approximately 5.5 miles to a point just south of Evaro.

The final plan-in-hand review was held on October 12, 1983. A location and design public hearing was also held on October 12, 1983 in Missoula, Montana, where approval was received and the project accepted favorably.

On October 13, 1983, the Montana Dept. of Fish, Wildfife and Parks advised the Montana Highway Dept. that a species of westslope cutthroat trout (Salmo Clarki Lewisi), which is currently classified as a fish of special concern in Montana, is found in O'Keefe Creek. This PER considers the impacts on the species and the mitigation there of.

This PER will consider two alignments. The alignment presented at the public hearing which would follow the present alignment and have a channel change of O'Keefe Creek of about 1,400 feet. This alternative was not acceptable to Montana Department of Fish, Wildlife, and Parks. The alignment proposed by the MDFWP will cross O'Keefe Creek to the west avoiding a critical stretch of stream, and will have 2 additional crossings of O'Keefe Creek at which culverts will be provided. The proposed action in this PER will utilize the alignment recommended by the MDFWP.

The consideration that brought about the choice of the proposed action was the fear of immediate impact to the westslope cutthroat trout in the creek. The channel change would have caused an immediate impact to the stream by disruption of the natural habitat in the section of the channel change. However, in the long run this section of stream could have lessened impacts and possibly an enhancement of the overall fish habitat.

The proposed action will have fewer immediate impacts to fish habitat and would leave the fish mainly undisturbed. There will, however, be approximately 300 feet of permanent loss of habitat due to the culverts.

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I. Description of the Proposed Action

The proposed project begins near the intersection of Interstate 90 and U.S. 93, Federal Aid Primary Route 5, at the Desmet Interchange, and extends northerly along FAP Route 5 for approximately 5.5 miles to a point on U.S. 93 just south of Evaro. The entire project is located within the boundaries of Missoula County and the last 3.0± miles parallel the O'Keefe Creek Floodplain. The attached map has the project limits and location shown thereon.

The Montana Department of Highways is developing this project with 100 percent state funds.

The first 3 miles of this project were constructed in 1934 with improvements made in 1955. This section of road has a 24-foot roadway width including safety improved sections with a 26-foot width. The next 1.5 mile section was built in 1948 with improvements made in 1954. This stretch has a 30-foot roadway width. The final portion includes a 36-foot roadway built in 1961 and improved in 1976.

The proposed action is a four-lane roadway with a roadway width of 64-feet for approximately the first 2.5 miles with the remainder of the project being 56 feet wide. The mountainous terrain, unstable hillsides and surrounding topography have a limiting effect on the roadway alignment and width being proposed on the last approximately 3.0 miles.

II. Need

The need for this project is demonstrated by the present and predicted traffic volumes for this roadway along with the accident rate.

A. Traffic Volumes

1981 Average Daily Traffic = 4200
1984 Average Daily Traffic = 4400
2004 Average Daily Traffic = 6500-9500
Design Hourly Volume = 13%
Distribution = 55-45%
Trucks = 15%
All Trucks = 40%

The future traffic range of 6500 to 9500 has been provided due to the uncertainty of proposed subdivision activity. The MDOH Project Development Division statistics indicate traffic over this section of road during the past 10 years has increased at an approximate rate of 3.0 percent annually. Historical data indicates that traffic will continue to increase at a 2.0 to 2.5 percent annual growth rate over the next 23 years without subdivision development.

B. Accidents

The accident rates and severity rates for this section of road are shown below. The rates are accidents and fatalities per one million vehicle miles.

Section	Accident Rate	Severity Rate
First 3.0± miles	3.17	1.707
Next 1.5± miles	2.26	1.600
Last 1.0± miles	2.05	1.333
Statewide average	2.36	1.49
Critical average	+3.93	+1.75

The first 3.0± mile section has an accident and severity rate greater than the state average, with the severity rate approaching critical.

C. Existing Conditions

The need for this project is also supported by a very low sufficiency rating, which is a comparison of the existing condition of the highway to contemporary design standards. The following are the most recent ratings on this stretch of road:

First 3.0± Miles

	Max Rating Possible	Present Rating
1. Foundation	10	3
2. Surface	30	18
3. Drainage	10	7
4. Safety	20	2
5. Capacity	30	0
	100	30

Next 1.5± Miles

1.	Foundation	10	4
2.	Surface	30	20
3.	Drainage	10	7
4.	Safety	20	10
5.	Capacity	30	0
		100	41

Last 1.0± Miles

1.	Foundation	10	8
2.	Surface	30	25
3.	Drainage	10	10
4.	Safety	20	6
5.	Capacity	30	11
		100	60

III. Alternatives

This section describes the alternatives selected for evaluation. The range of alternatives was narrowed to two on the basis of environmental and economical considerations.

Alternatives 1 through 3 were previously considered in the first PER, but are not now being pursued as viable alternatives.

Alternative 4 is a variation of the proposed action, with a modification of the stream crossing.

The alternatives that were considered in this PER were the Preferred Alternative and the Proposed Action. Discussion is cited in this section and in the Impacts Section.

A. Alternatives Previously Considered

1. No Build Alternative

One alternative considered for this project was the "no build" or "do nothing" alternative which would leave the roadway in its present condition. This alternative was not pursued as this would not enhance safety for this stretch of road nor increase the capacity of the facility.

2. Wide Two or Three-Lane Alternative

Another alternative considered was a wide two-lane or a three-lane roadway. This alternative would encroach either into the hillside to the east, or move O'Keefe Creek to the west. These roadways would not provide service volumes which are high enough to serve the design traffic volumes expected along this portion of road as established by the design criteria. The level of service design criteria or "Design Capacity" being conidered was based upon conditions considered appropriate for highway design by the AASHTO "Policy on Geometric Design of Rural Highways" (See Attachment 1).

3. Four-Lane, East Alternative

The third alternative considered was a four-lane roadway which would widen to the east of the present alignment into the hillside (Station 155± to Station 175±). Rock and soil formations on the hillside were considered unstable and would cause hazardous geological and environmental conditions from cutslopes. Landslides and excessive erosion are associated with this material, and Burlington Northern Railroad tracks directly upslope would be endangered if a cutslope failure were to occur. This alternative would require construction of extensive anchored retaining walls on both sides of the roadway to prevent slope failure and minimize encroachment into the stream. Costs associated with this alternative are much greater than the other alternatives, making this alternate not feasible.

4. Open Bottom Arch Alternative

This alternative would be the same as the proposed alternative except that open bottom arch pipe would be used for stream crossings instead of culverts. This would allow the stream to maintain a natural bottom habitat for fish. Since it would have the same riparian losses and channel modifications as the proposed action, but at a higher cost, this alternative was not pursued.

B. Preferred Alternative

The preferred alternative by the Montana Department of Highways was a four-lane roadway following the present alignment, for the most part, with widening to be accomplished on the west side adjacent to O'Keefe Creek. This would require approximately 1,400 feet of channel change on O'Keefe Creek (Station 148± to Station 162±).

This alternative would be the most economical (Table 1) and the best choice from a roadway design standpoint. The long term effects on O'Keefe Creek could be less than the proposed action and may even have enhanced the overall habitat of the creek.

Table 1

Alternative	Comparable Cost*
Preferred Alternative (1464' channel change)	$ 193,000
Proposed Action (culverts)	$ 294,000
Proposed Action (open bottom arches)	$ 379,000

* Cost figures are estimates for comparing the alternatives, and may not represent actual cost.

C. Proposed Action

The proposed action is a four-lane roadway with a roadway width of 64 feet for approximately the first 2.5 miles with the remainder of the project being 56 feet wide.

The proposed action will cross O'Keefe Creek in two locations (147± and 162±), shifting the roadway west of a critical section of stream. Culverts will be used at the crossings and approximately 900 feet of stream will be altered or modified. The culverts will allow the fish to move freely and a drop structure may be required at the outlet. The new channel that is modified will have a five foot bottom width. The culvert structures that will be used at the

crossings are acceptable to the Montana Department of Fish, Wildlife, and Parks.

Roadway ditch sections through the canyon corridor will be reduced from standard ditch sections which will lessen impacts on the surrounding environment and O'Keefe Creek, reduce right-of-way take, and minimize rock excavation and sliver cuts.

The proposed action is the alternative that was agreed to by both the MDOH and MDFWP.

IV. Impacts

A. Vegetation and Prime Land Impacts

This project follows the present road for the most part and will disturb habitat adjacent to O'Keefe Creek. The vegetation adjacent to the route is primarily grasslands and forest types. Tree species present are douglas fir, ponderosa pine, alder, poplar, and birch.

Shrubs present are willows, red osier dogwood, chokecherry, hawthorn, currant, snowberry, woods rose, serviceberry, and mock orange. Bluebunch wheatgrass, smooth brome, and Kentucky bluegrass are the grasses present.

The U.S. Department of Agriculture soil scientists have inspected the area and determined that no prime or unique farmlands exist adjacent to the project. (Attachment 2)

B. Fish and Wildlife Impacts

1. Existing Wildlife and Fisheries Resources

Wildlife found in the project area include white-tailed and mule deer, elk, black bear, Hungarian partridge and ring-necked pheasant. Non-game species found in the vicinity include striped skunk, muskrat, least and common weasels, ravens and crows, magpies, marsh hawks and other raptors as migrants, and numerous other species of small birds and mammals.

O'Keefe Creek, which flows through the length of the project, is a small stream draining approximately 20 square miles at the lower limits of the project. The stream drains into the Clark Fork approximately 4 miles below the project's southern end. Average low flows of the stream appear to be approximately 5 cfs at the southern end of the project.

Above Station 180± the stream is very small, flowing less than 5 cfs, and has been previously impacted by highway construction and residential and commercial approaches which have required numerous small culverts and channel modifications. Near Station 220 the stream goes underground for some distance.

From Station 180± to Station 165± the stream picks up additional flow, but the quality of stream habitat has deteriorated due to removal of riparian vegetation by grazing, leaving little overhead cover for fish security, detritus production, or thermal screening. From Station 162± to Station 148± the riparian vegetation is undisturbed, forming a complete vegetative canopy over the stream 50 to 75 feet wide. The tree overstory is primarily alder and cottonwood, with an understory of hawthorn, woods rose, snowberry and wild current. The stream in this reach is 4-10 feet wide with a single channel and gravel or cobble substrate.

Below the fenceline at Station 148±, down to approximately 140±, much of the streambank vegetation has been destroyed by grazing. The tree overstory is less than 25% and the stream habitat is of lower quality in this reach. At Station 130± the stream enters an impenetrable hawthorn thicket, through which it flows for about 2500 feet. The hawthorn provides a high level of overhead security, however, the braided channel does not offer the fish habitat quality of a single channel due to lack of depth.

Primary and secondary productivity in the project stream reach is estimated at low to moderate, due primarily to low dissolved chemical nutrients in the water. A population of pure strain westslope cutthroat trout (Salmo clarki lewisi) has been identified in this stream by the Montana Department of Fish, Wildlife, and Parks, one of two known genetically pure westslope cutthroat populations in the Clark Fork drainage, although other such pure populations have been identified in the Flathead River drainage.

This species has been designated a "Class A Species of Special Concern" by Montana Department of Fish, Wildlife, and Parks, primarily due to genetic introgression in many populations with rainbow trout (Salmo gairdneri), with which cutthroats readily hybridize. The hybrids are fully fertile and continue to propagate the rainbow gene pool in the population.

The population density of cutthroat trout in O'Keefe Creek is estimated at 900 ± 141 fish 2-11" long per 1000 feet. The population of fish larger than 6" is estimated at 84 fish/1000 feet. The larger fish were associated with deeper pools and overhead cover in the sampled section.

Other fish species occurring in the stream include brook trout, mountain whitefish, sculpins, and several species of minnows.

Using the Montana Department of Fish, Wildlife, and Parks procedure for classifying streams, O'Keefe Creek was ranked a Class 2 stream for Habitat and Species Value, and a Class 5 for Sport Fishery Potential. The Habitat and Species Value is based on a point system in which most points are awarded for important habitats of fishes of special concern. The stream was considered High Priority Habitat for a Class A Species of Special Concern, receiving 13 points on the value scale.

The Sport Fishery Potential Classification is based on Abundance (kg/300m), Access, Aesthetics, and Fishing Pressure.

O'Keefe Creek received an Abundance rating of 2 points, Ingress rating of 1 point, Aesthetics rating of 1 point, and a Fishing Pressure rating of 0 points, with a total 4 points, resulting in a Sport Fishery Potential Classification of 5, which is a limited fishery resource.

2. Impacts on Fisheries and Wildlife Resources

The U.S. Fish and Wildlife Service and Montana Department of Fish, Wildlife, and Parks were queried regarding rare and endangered species in accordance with the Endangered Species Act. The project area falls within the known or possible range of the bald eagle and peregrine falcon. The existing habitat is not suitable as breeding or migratory habitat by either species, therefore impacts of construction were assessed to be insignificant. (Attachments 3 and 4)

All possible construction alternatives will impact O'Keefe Creek to a greater or lesser extent in several areas. Replacement and/or lengthening of existing culverts will be required at Stations 174±, 200±, 238±, and 254±. This will result in temporary disruption or diversion of flows and minor channel changes for alignment of inlets and outlets. North of Station 180±, roadway fills will encroach on one side of the channel in several areas, which will result in some loss of vegetative cover and increased silt and turbidity in the stream. The total length of stream impacted by these encroachments is about 1500 feet. These impacts can be ameliorated by employing standard erosion control techniques, minimizing construction limits, minimizing riprap on culvert inlets and outlets where possible, and revegetating promptly.

The considered alternatives are described briefly below. A more complete discussion is presented in Section III, Alternatives.

Alternative 1 - No-build, status quo

Alternative 2 - Wide 2-lane or 3-lane, cut into hillside, or channel change O'Keefe Creek

Alternative 3 - Four-lane present alignment, cut into hillside with anchored retaining walls.

Alternative 4 - Four-lane, new alignment west of stream between Stations 145± and 165±, open bottom arch for stream crossings.

Preferred Alternative - Four-lane, present alignment, no cut into hill, channel change O'Keefe Creek.

Proposed Action - Four-lane, new alignment west of stream between Stations 145± and 165±, culverts at stream crossings.

A summary of relative impact severity rankings for each alternative is given in Table 2. In this table impacts for the different alternatives are ranked against each other, with the most severe being given a ranking of 4, the least severe a ranking of 0.

Alternative 1, the no-build alternative, would leave the existing natural environment unmodified, thus was assigned a relative impact severity of 0.

Table 2. Relative Impact Severity of Highway Construction Alternatives on Fish and Wildlife Resources

	Impact Severity									
	Fisheries					Wildlife				
Alternative	0	1	2	3	4	0	1	2	3	4
1	x					x				
2					x					x
3				x					x	
4			x					x		
Preferred					x					x
Preferred *				x					x	
Proposed				x				x		

Preferred* has a special revegetation program and channel change design incorporating stream fish habitat structures.

Alternative 2 was assessed a relative impact severity of 4 for fisheries and 4 for wildlife. This alternative will encroach on the riparian vegetation between Stations 148± and 162±, and would require a channel change in this vicinity. Impacts on the stream north of Station 165± would be minimal due to the shorter culvert lengths required and reduced width of construction limits. The ratings accessed did not include the option of cutting into the hillside, which would be the same as alternative 3.

The following alternatives primarily differ in alignment and construction concepts from Station 145± to Station 165±. North of Station 165±, alignment and width of alternatives are the same.

Alternative 3 would result in loss of approximately 0.25 acres of riparian vegetation on the east bank of O'Keefe Creek between Stations 152± and 165±, reducing fish and wildlife habitat quality permanently through this reach. The required retaining wall on the west roadway embankment, which would be very near the stream at some points, would permanently eliminate critical riparian vegetation and cause an increase in the thermal input to the stream due to the heat reflected and retained by the wall. The permanent nature of habitat loss, the potential thermal effects of the retaining wall on the stream, and the close proximity of the roadway to the stream caused this alternative to be given an impact severity ranking of 3 for fisheries impacts and 3 for wildlife impacts.

Alternative 4 was assigned a fisheries impact severity of 2. The use of open bottom arches for stream crossings would provide fish passage at all times and cover for fish. Losses of riparian vegetation would be the same as the proposed alternative. This alternative was assessed to have a wildlife impact severity of 2.

The preferred alternative of the MDOH would result in a 1450± foot channel change on O'Keefe Creek, temporary but long-term (10-20 years) loss of much of the riparian habitat associated with this reach of stream, and temporary displacement of the fish population of this reach. This could represent temporary displacement of up to 1200 trout, including up to 120 fish over 6" long. This estimate is based on Department of Fish, Wildlife, and Parks electro-fishing survey data obtained in 1982. Additional impacts to the fishery would be caused by the loss of aquatic plant and animal production in the channel-changed reach for up to a year afterward. Studies have shown that although primary production by algae may recover quickly, recovery of invertebrate population densities may require up to a year, more in cases where additional sediment deposition in the stream occurs.

This alternative was assigned an impact severity of 4 on both fisheries and wildlife due to the loss of approximately 1 acre of critical riparian vegetation and primary and secondary aquatic productivity. An aggressive revegetation program, proper channel change design and construction, and the addition of some stream habitat improvement structures to provide fish cover could hasten the recovery of the channel-changed reach and reduce the immediate impacts of the project on fish survival. In the long term (15+ years), the fish holding capacity of this stream segment might actually be increased if proper design were implemented. Long-term advantages of this alternative are that the stream is not in such close proximity to the road, allowing better stream access and recovery of riparian habitat, and that no stream length is permanently lost to culvert installation. These measures, if correctly carried out, would reduce the fisheries impact severity to 3.

The proposed action was assigned a fisheries impact severity of 3 and a wildlife impact severity of 2. This alternative will result in permanent loss of approximately 250-300 feet of

stream due to culvert installation and an additional 600 feet of channel change for alignment of inlets and outlets for a total channel length of approximately 900 feet. However, stream habitat which has been identified as critical by DFWP would remain largely undisturbed by this alternative. Due to the high stream gradient (1.8% to 3%±) special design provisions for culverts will be required to insure fish passage at all times of the year. Impacts on wildlife from the proposed alternative are due to the loss of riparian vegetation and the isolation of 1500 feet of streambank habitat by the roadway.

C. Water Quality Impacts

O'Keefe Creek is the only significant water resource in the area. O'Keefe Creek runs parallel to the existing highway for the most part on the northerly 3.0± miles of the project.

The corridor in which O'Keefe Creek and the highway are located is narrow and will require some encroachment in and realignment of the creek to accommodate the new construction.

There will not be any significant impacts to water quality after the completion of the project. The impacts to O'Keefe Creek will occur during construction. Coordination will take place as required with the Corps of Engineers and the Montana Department of Fish, Wildlife, and Parks in accordance with the Federal Water Pollution Control Act and the Montana Stream Protection Act.

Construction, with alteration or realignment of O'Keefe Creek, will be coordinated with the Montana Department of Fish, Wildlife, & Parks to ensure minimal impact, or enhancement of fishery habitat. Streambank cover will be re-established to create suitable conditions for fish.

The contractor will be required to exercise every reasonable precaution throughout construction to prevent pollution of all

waters located in the project vicinity. The contractor will be required to meet the requirements of the applicable regulations of the Montana Department of Fish, Wildlife, & Parks, Department of Health and Environmental Sciences, and other State or Federal regulations to the prevention or abatement of water pollution.

Soil erosion and sedimentation during construction will be kept to a minimum through the use of temporary and permanent erosion control measures as set forth in the Montana Department of Highways Specifications and applicable state and national laws. All areas disturbed by construction operations will be reseeded following construction.

D. Floodplains and Wetlands Impacts

In evaluating the floodplain for Executive Order 11988 purposes, all alternatives, except the no-build alternative, will encroach to some extent onto the O'Keefe Creek floodplain. Due to the geography of the area, the encroachments cannot be avoided if the highway is to be improved. The floodplain is not delineated by the state program, or by the National Flood Insurance Program. Missoula County officials have indicated that there are no plans in the near future to delineate this area. No permits are anticipated for work in the floodplain.

There are no wetlands, other than those adjacent to the stream in the area of encroachment, affected.

E. Air Quality Impacts

A temporary increase in air pollution is expected as a result of construction operations. The contractor will be required to meet State Air Pollution Standards with regard to dust control and air pollution control.

The potential for increased exhaust emissions will become greater as vehicular traffic increases. The improved traffic

flow provided by this project will tend to offset the potential increase. This project should, therefore, have little effect on air quality in the area.

The project is not in conflict with the State's Implementation Plan for achieving National Ambient Air Quality Standards.

F. Historical and Archaeological Impacts

A cultural resource survey was conducted on this project and no cultural resources were identified in the vicinity of the project. The highway project will not have any affect upon properties which may be eligible for inclusion in the National Register of Historic Places. Consultation with the State Historic Preservation Office indicates this project is in compliance with Section 106 of the National Historic Preservation Act and State Antiquities Act.

G. Park, Recreational, and Section 4(f) Impacts

Consultation with the National Park Service indicates no established or studied units of the National Park System will be adversely affected by the project. No public parks, recreation areas or wildlife refuges are located within the immediate area. As a result, no Section 4(f) and 6(f) properties are affected by this project. (Attachment 5)

H. Social and Economic Impacts

1. Transportation

The proposed construction would significantly improve the existing roadway conditions and thereby provide a safer, more efficient transportation facility for the traveling public. Increased social and economic activity is expected, and access to religious, employment, recreational, educational, and cultural sites will be enhanced. The project should not have any adverse effect on minority groups.

2. Employment

This project will have little or no effect on the long-term employment situation in the area. A slight increase in employment will occur during construction, which should benefit the local economy.

3. Aesthetics

This project should have no adverse effect on the scenic qualities of the surrounding terrain. All disturbed areas such as roadside ditches and cut and fill slopes will be seeded and revegetated. The proposed alignment will keep disturbed areas to a minimum and will preserve the scenic quality of the area.

I. Land Use Impacts

1. Community Facilities

Since this project is in close proximity to Missoula, the improved access makes that land adjacent to the right-of-way from the beginning of the project to approximately Station 150 a prime location for future subdivision activity.

Missoula's economy is one of the only areas in the state that showed some positive signs of growth within the last year. If this trend continues, the highest and best use of the land described above could quickly change to rural subdivision.

There is considerable subdivision activity in the area at this time, with access control being acquired. Between now and the contract letting date, any request for a subdivision approach should be reviewed for proper sight distance and adequate drainage. Once the roadway is in position there will be limited access.

This highway project is not in conflict with the functioning of any existing or proposed facilities such as schools, police, fire protection, parks or recreation areas. The project will not create any barrier preventing local residents from gaining access to community facilities.

The Confederated Salish and Kootenai Tribes of the Flathead Reservation and the Missoula County Planning Board have been consulted relative to area plans, community facilities and land use controls. Comments indicated this project is not in conflict with any local or regional comprehensive land use plans, local community or planning board goals and policies relative to land use and transportation, nor any private, state or federal plans in the area.

2. Right-of-way

Maximum use will be made of the existing right-of-way, with approximately 70 feet of additional right-of-way being purchased on the west side of the present alignment on the southern end of the project. Approximately 25 acres will be taken off the county tax roles, which would not be a significant amount. Impact to landowners will be insignificant with ditches and drainage structures perpetuated.

Where the alignment shifts west across the stream, additional right-of-way will be taken. The abandoned roadway will be obliterated, revegetated and returned to the landowner.

Through the canyon corridor right-of-way will be taken from both sides of the road (Station 150± to end). All accesses will be perpetuated.

3. Relocation

It does not appear that any houses will have to be relocated because of this project. However, in the event relocation of any housing would be required, relocation assistance will be provided in accordance with the State Relocation Assistance Program. Every attempt would be made to relocate people in similar properties in the same environment.

There are no utility relocations on this project subject to the Utility Siting Act. All affected utilities will be moved prior to construction. All existing utilities will be perpetuated throughout the project.

J. Noise Impacts

Traffic noise will increase on this route as traffic volumes increase. Traffic noise will increase regardless of the new construction. A noise study was conducted on this project using the FHWA Highway Traffic Noise Prediction Nomographs (Attachment 7). The maximum LEQ noise level of 67 dba will be exceeded slightly in approximately six different locations. Noise mitigation measures are not appropriate for this type of project since sight distance would be restricted by use of noise barriers and barriers would not be pleasing from an aesthetics point of view. During construction there will be a temporary increase in the noise level.

K. Irreversible and Irretrievable Commitment of Resources

No resources other than money, fuel, labor and road building materials will be irretrievably committed to this project. The commitment of social and cultural resources will be insignificant. There does not appear to be any major irretrievable commitment of resources that would significantly effect the environment in the area of the project. Therefore, the use of money, fuel, labor and materials is considered to be justified as it will provide a much needed highway facility to serve the traveling public.

V. List of Preparers

The State of Montana, acting through the Department of Highways, has the responsibility to manage the preparation of this Preliminary Environmental Review. Those individuals or agencies consulting or involved in the preparation of this review are listed below:

Montana Department of Highways

(Preparation)
L. J. Ivanovitch, Manager, Environmental Unit
C. B. Coleman, Environmental Engineer, Environmental Unit
T. R. Ford, Anthropologist, Environmental Unit

(Fish & Wildlife)
P. A. Garrett, Ph.D., Fisheries/Wildlife Biologist, Environmental Unit

(Hydraulics)
C. S. Peil, P.E., Manager, Hydraulics Unit

(Land Use)
D. W. Cromer, Land Use Planner

(Traffic)
G. A. Jackson, P.E., Manager, Traffic Unit

Consulting Agencies

(Fish & Wildlife)
Dale Harms, Acting Field Supervisor, Endangered Species
U.S. Fish and Wildlife Service, Helena, MT

Dennis L. Flath, Non-game Biologist
Montana Dept. of Fish, Wildlife & Parks, Bozeman, MT

Robert H. Torheim, Regional Forester, U.S.D.A., Forest Service

(Lands)

Kit B. Sutherland, District Conservationist
Soil Conservation Service, Missoula, MT

Charles L. Walters, Area Conservationist
Soil Conservation Service, Missoula, MT

VI. Coordination With Others

The correspondence attached documents coordination with Federal, State and local officials.

A Location and Design Public Hearing was held October 12, 1983. All those present supported the project and felt it was needed.

Based on the foregoing, it is felt that this project does not constitute a major action significantly effecting the quality of the human environment. Therefore, the preparation of an Environmental Impact Statement is not required.

Concur Don M. Harriott
Don M. Harriott, P.E., Administrator
Engineering Division

Date April 24, 1984

pz/323C

APPENDICES

(Attachments and Letters of Coordination)

ATTACHMENT 1

MONTANA DEPARTMENT OF HIGHWAYS
HELENA, MONTANA 59620

MEMORANDUM

TO: K. F. Skoog, P.E., Supervisor - Location & Road Design Section

FROM: Gregory A. Jackson, P.E., Manager - Traffic Unit

RE: FF 5-1(1)
Desmet to Evaro

DATE: March 17, 1983

This is to transmit to you the results of our capacity analysis of both the existing and proposed typical sections on the subject project.

For purposes of analysis the subject project was divided into two segments. This was due to the severe change in profile grade on the northern half and the substantial influence the proposed subdivision is expected to have on the southern half. The division point was established where the proposed typical section changes from 64 feet to 56 feet.

Segment No. 1

This segment runs from the southern project limit (Sta. 175+00) north approximately 2.84 miles (Sta. 25+00). The main criteria used in the analysis of this section were as follows:

1. Existing typical section: 24' (two lanes)
2. Proposed typical section: 4 - 12'-lanes and 2 - 8' shoulders
3. Year 2004 ADT: 9500 V.P.D.; D.H.V.: 1235 V.P.H.
4. Truck percentage: 10% (year 2004), 15% (present)
5. Grade: +1.0% to -2.2%; 2% grade used for calculation
6. Percent passing sight distance: 68% (1,500 feet minimum)
7. Rural section: Design speed 60 mph.

This portion of the subject project appears to run through relatively level terrain with no long sustained steep grades. A two percent grade was used in the analysis because it was by far the longest single sustained grade in the section.

You can see that the truck percentage was also adjusted for the year 2004. That took into account the affect of the subdivision on design percentage. The subdivision should generate little or no truck traffic. Therefore, since the subdivision is expected to generate approximately 3,000 V.P.D. (year 2004), the percentage trucks was adjusted accordingly.

From this criteria the capacity for both the existing and the proposed typical sections were calculated. Then keeping in mind that this is a rural section, the service volumes at Level of Service "B" were identified. The results are as follows:

	*Two-Lane	*Four-Lane N.B.	*Four-Lane S.B.
Capacity (LOS "E")	1,620	2,860	3,640
Service Volume (LOS "B")	500	572	728
D.H.V. (year 2004)	1,235	617	617
**Service Volume (LOS "C")	900	1,430	1,820

*Volume in vehicles per hour
**Just provided for comparison

Based on the various service volumes calculated for the existing two-lane, the year 2004 D.H.V. would fall well into the Level of Service "D" range and is substantially greater than the limiting value for Level of Service "B."

The four-lane analysis was broken down by direction. According to the various service volumes calculated for this typical, the year 2004 D.H.V. exceeds the limiting value for Level of Service "B" by approximately 8% in the northbound direction. This is relatively insignificant when considering that the limiting value for Level of Service "C" is approximately 250% of the Level of Service "B" value. Level of Service "B" is not exceeded by enough to justify adding a third northbound lane. Only a slight fluctuation of the percentage for D.H.V. could place it at Level of Service "B." There is no way of knowing what affect the subdivision will have on lowering the percent for D.H.V. at this time.

Segment No. 2

This segment covers the remaining 3.04 miles on northern section of the subject project. The main criteria used for the analysis of this section are as follows:

1. Existing typical section: 24' (two lanes)
2. Proposed typical section: 4 - 12'-lanes and 2 - 4' shoulders
3. Year 2004 ADT: 6500 V.P.D.; D.H.V.: 845 V.P.H.
4. Truck percentage: 15%
5. Grade: -1.2% to -6.5%; 6.5% grade used for calculation
6. Percent passing sight distance: 41%
7. Rural section: Design speed 60 mph.

This portion of the subject project appears to run through much more difficult terrain. The longest sustained grade in this section is 6.5% and covers a

distance of just over a mile. Since this is by far the longest sustained grade on the segment it was used for the analysis.

Since this section is beyond the segment influenced by the subdivision, the lower projected A.D.T. was used. The truck percentage is also the original value provided by the Planning and Statistics Bureau.

Once again, from this criteria the capacities were compiled for both the existing and recommended typical sections. The results are as follows:

	*Two-Lane	*Four-Lane N.B.	*Four-Lane S.B.
Capacity (LOS "E")	381	1,420	1,700
Service Volume (LOS "B")	108	294	340
D.H.V. (year 2004)	845	422	422
Service Volume (LOS "C")		710	850

*Volume in vehicles per hour

Based on the service volumes calculated for the existing two-lane, there is no way that it could serve the expected volumes. In fact it appears that the existing two-lane is at or near capacity right now.

Once again, the four-lane analysis was broken down by direction. In this case the year 2004 D.H.V. in both directions exceed the limiting values for Level of Service "B." That puts the proposed four-lane in the range of Level of Service "C." In order to achieve Level of Service "B," an additional lane would have to be added in each direction.

It is our understanding that the surrounding topography has a very limiting affect on the available width for the proposed typical section. This, in conjunction with the grades experienced, would indicate the section is in mountainous terrain. You will probably want to take this into consideration when determining the design level of service. However, we do not recommend any reduction in the design speed below 60 mph. Reduction in the design speed would definitely have negative affect on the level of service.

Conclusion

In conclusion, the proposed typical sections on the two segments fall within the limits for Level of Service "B" and Level of Service "C" respectively, with the projected year 2004 design volumes. This appears to be acceptable limits for design on this project.

The design volumes used on the first segment took into consideration that the Bitterroot subdivision had reached full potential by design year. The truck

percentage was adjusted accordingly but the percentage for D.H.V. was not changed.

The major consideration given to segment No. 2 was that it passes through mountainous terrain with somewhat restrictive topography. It will be desirable to maintain the 60 mph design speed through this section since this criteria does have substantial affect on level of service. The 60 mph design on Segment No. 1 must be maintained to allow Level of Service "B" to exist.

Should you have questions regarding this analysis or are in need of additional information, please contact us.

GAJ/DPD/pz/2N

ATTACHMENT 2

[illegible]

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE P. O. Box 3838, Missoula, Montana 59806

December 5, 1979

FF 5-1 (01)
DeSmet-Evaro

Stephen C. Kologi
Preconstruction Bureau
Department of Highways
Helena, Montana 59601

In answer to your request for information on existence of prime and unique farmlands in the DeSmet-Evaro area, we have had our soil scientists inspect the area. No prime or unique farmland lies in this area.

The above confirms the information given you by telephone today.

Charles L. Walter
Charles L. Walter
Area Conservationist

Date Recd. Preconst. 12/6/79

Act	Info	MAIL ROUTE	Attach	Initial
		30		
		30 Eng. Specialties		
		31 Contract Plans		
		32 Loc. Road Design		
		33 Environmental		
		34 Hydraulic		
		35 Surfacing Design		
		35 Photogrammetry		
		[illegible]		
		36 Traffic		
		37 Pub. Hearing		
		38 Sec.-Urban		
		Consultant Design		
		Ben Miller		

ATTACHMENT 3

MONTANA

DEPARTMENT OF

FISH, WILDLIFE AND PARKS

Box 5, MSU
Bozeman, MT 59717
November 14, 1983

Mr. Paul A. Garrett
Fisheries and Wildlife Biologist
Montana Department of Highways
2701 Prospect
Helena, MT 59620

Dear Paul,

Re: FF 5-1(1)0 Desmet-Evaro

Thank you for your letter concerning the Desmet-Evaro reconstruction project.

I can foresee no short-term effects on either the bald eagle or peregrine falcon. However, changes in water quality could pose some long-term effects unless suitable measures to maintain or enhance water quality are incorporated.

The proposed channel change on O'Keefe Creek could have impacts on other species of wildlife, particularly the west-slope cutthroat which you mentioned in your letter. Continued cooperation with our Regional office in Missoula will be necessary to ensure the future welfare of this, and other, species.

Sincerely,

Dennis L. Flath

Dennis L. Flath
Nongame Biologist

DLF/mkm

cc: Workman, R-2

Date Recd. Preconst. 11/15/83

Act	Info	MAIL ROUTE	Attach	Initial
		29		
		30 Eng. Specialties		
		31 Contract Plans		
	✓	32 Loc. Road Design		
✓		33 Environment		
		34 Hydraulic		
		35 Surfacing Design		
		36 Traffic		
		37 Pub. Hearing		
		38 Photogrammetry		
		39 Consultant Design		
	✓	MaGrath		
	✓	Barden		
	✓	[illegible]		

ATTACHMENT 4

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Helena Office
Federal Bldg. U.S. Courthouse
301 South Park
P.O. Box 10023
Helena, Montana 59626

IN REPLY REFER TO:

Date Recd. Precons t. 11/[illegible]

Act	Info	MAIL ROUTE	Attach	[illegible]
		29		
	✓	30 Eng. [illegible]		
		31 Contract Plans		
	✓	32 Loc. [illegible] Design		
✓		33 Environment		
		34 Hydraulic		
		35 Surfacing Design		
		36 Traffic		
		37 Pro. Planning		
		38 Photogrammetry		
		39 Consultant Design		
	✓	[illegible]		
	✓	Garrett		
	✓			
	✓	File		

November 16, 1983

Mr. Paul A. Garrett
Fisheries and Wildlife Biologist
Montana Department of Highways
2701 Prospect
Helena, MT 59620

Dear Mr. Garrett:

We have reviewed your October 27, 1983 letter on the DeSmet-Evaro (FF 5-1(1)0) Highway Project. We concur with your determination of no affect to the bald eagle (Haliaeetus leucocephalus) and peregrine falcon (Falco peregrinus).

If realignments of powerlines (less than 69 kV) are required, such powerlines should be designed and constructed according to the procedures identified in "Suggested Practices for Raptor Protection on Powerlines - The State of the Art in 1981" (Raptor Research Report No. 4), Raptor Research Foundation, Inc, 1981. A copy of this report may be obtained by writing to: Raptor Research Foundation, Department of Veterinary Biology, University of Minnesota, St. Paul, Minnesota 55101.

Thank you for your efforts to consider and conserve endangered species and their habitats.

Sincerely,

Dale Harms

Dale Harms
Acting Field Supervisor
Endangered Species

cc: Ecological Services, FWS, Billings, MT Attn: Bill Jones

ATTACHMENT 5

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-1

DEPT. OF HIGHWAYS
RECEIVED
18 1977
HELENA, MONTANA

REPLY TO: 7700 Transportation System

April 13, 1977

SUBJECT: Road Between DeSmet and Evaro
(Your ref. FF 219 (36) dated 3/15)

TO: Mr. H. G. Anderson, Director of Highways
State Department of Highways
6th Avenue and Roberts
Helena, MT 59601

The proposed DeSmet-Evaro route from DeSmet interchange to Evaro Hill has been reviewed against the criteria of section 4(f) of the Department of Transportation Act of 1966, Public Law 89-670, as amended by the Federal-Aid Highway Act of 1968, Public Law 90-495, Section 18.

Since this route crosses an area of public land under National Forest designation, as the agency having jurisdiction of these public lands, we have determined that the route does not encroach on or use land from any of the types of specially designated areas in the above Public Laws.

for Tom Coston
ROBERT H. TORHEIM
Regional Forester

Date Recd. Preconst. 4/15/77

Act	Info	MAIL ROUTE	Attach	Initial
		30		
		30 [illegible] Specialties		
		[illegible] Contract Plans		
		32 Loc. Road Design		
		33 Environmental		
		34 Hydraulic		
		35 Surfacing Design		
		[illegible] Photogrammetry		
		BEN MILLER		
		[illegible]		
		[illegible] Hearing		
		[illegible] Urban		
		[illegible] Consultant Design		
		[illegible]		

ACT	INF	
		RETURN TO [illegible]
		MAY BE RETAINED
	/	DIRECTOR
		CENTRALIZED SERVICES
		ACCOUNTING
		DATA LIBRARY
		PLANNING & [illegible]
		[illegible]
Z		[illegible] B
		[illegible]

DeSmet Evaro 2004 Traffic #1

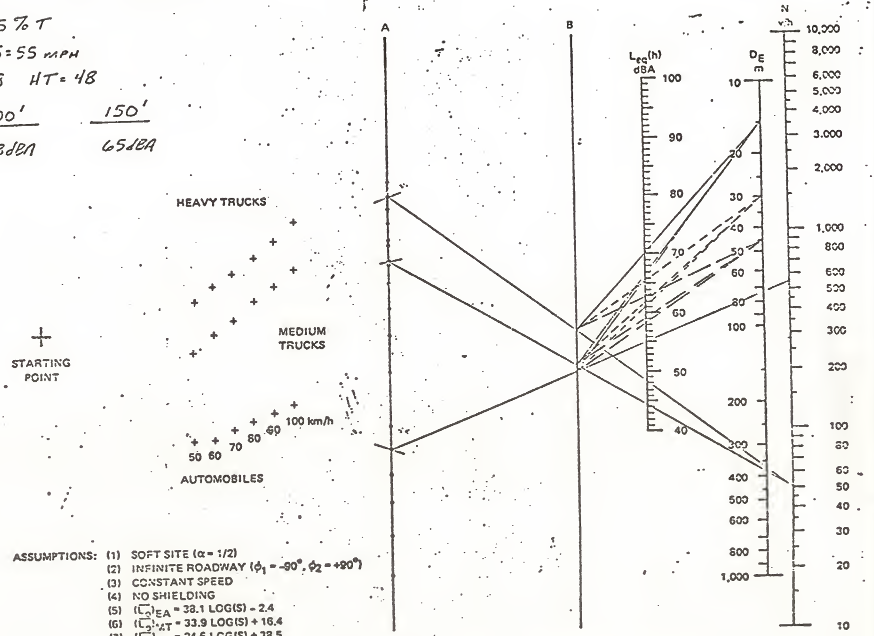
ADT = 6500 15 % T

DHV = 650 S = 55 mph

A = 554 MT = 48 HT = 48

@ 50'	100'	150'
L(h) = 73 dBA	68 dBA	65 dBA

ATTACHMENT 6



ASSUMPTIONS:
(1) SOFT SITE ($\alpha = 1/2$)
(2) INFINITE ROADWAY ($\phi_1 = -90°$, $\phi_2 = +80°$)
(3) CONSTANT SPEED
(4) NO SHIELDING
(5) $(\overline{L_o})_{EA} = 38.1 \text{ LOG}(S) - 2.4$
(6) $(\overline{L_o})_{MT} = 33.9 \text{ LOG}(S) + 16.4$
(7) $(\overline{L_o})_{HT} = 24.6 \text{ LOG}(S) + 38.5$

Figure 20. FHWA Highway Traffic Noise Prediction Nomograph (Soft Site)

E SMET - EVARC   2004 TRAFFIC #2

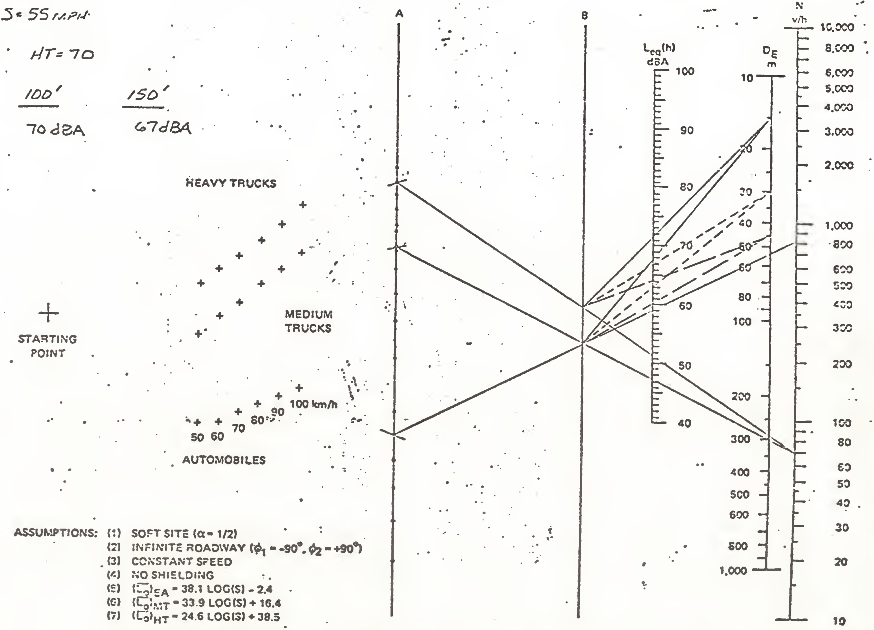
DT = 3500   15% T

HV = 950   S = 55 MPH

= 810   MT = 70   HT = 70

℄ 50'   100'   150'

(h) = 74 dBA   70 dBA   67 dBA



ASSUMPTIONS:
(1) SOFT SITE ($\alpha = 1/2$)
(2) INFINITE ROADWAY ($\phi_1 = -90°, \phi_2 = +90°$)
(3) CONSTANT SPEED
(4) NO SHIELDING
(5) $(\bar{L}_0)_{EA} = 38.1 \log(S) - 2.4$
(6) $(\bar{L}_0)_{MT} = 33.9 \log(S) + 16.4$
(7) $(\bar{L}_0)_{HT} = 24.6 \log(S) + 38.5$

Figure 20. FHWA Highway Traffic Noise Prediction Nomograph (Soft Site)

U.S. GOVERNMENT PRINTING OFFICE : 1979 0-293-544/810

Copy to Wicks
on 10-19-83
cmv.

Copy to Preconstruction
10-17-83
cmv.

MONTANA

DEPARTMENT OF

FISH, WILDLIFE AND PARKS

1420 East 6th Avenue
Helena, Montana 59620

October 13, 1983

RECEIVED
OCT 17 1983

Mr. Don Harriott
Department of Highways
2701 Prospect Avenue
Helena, Montana 59620

Dear Mr. Harriott:

I am enclosing a copy of a letter relating to the westslope cutthroat trout in O'Keefe Creek. The Preliminary Environmental Review indicates that 1,400 feet of the stream will be channel changed on project FF 5-1(1)0, DeSmet-Evaro. As the letter indicates, this stream is extremely unique in the Clark Fork drainage, in that it sustains a pure strain of westslope cutthroat trout. The overhead vegetative cover which now exists along the stream is in our opinion particularly important to this population. This vegetation provides shading to prevent water temperature from exceeding threshold levels which would be damaging to the population, and provides protection for the cutthroat from predators in this relatively small stream. Every highway design option should be thoroughly investigated to avoid disruption of this stream or its adjacent bank vegetation.

The westslope cutthroat trout is presently classified as a Class B fish of special concern in Montana. Since populations throughout the state are being subjected to increasing pressure through habitat loss, the Montana Chapter of the American Fisheries Society recently recommended the classification be upgraded to Class A. This will probably be done in the near future. Dr. Fred Allendorf, University of Montana geneticist who has done considerable research on the status of Montana cutthroat, believes even more stringent action should be taken and that the westslope cutthroat trout should be designated an endangered species. A letter from Dr. Allendorf outlining his reasoning will be forwarded.

While we have not had the opportunity to review new plans for the alignment of the roadway in this area, earlier plans avoided a critical section of O'Keefe Creek by an alignment to the west of the stream in the area of Station 145 to 165. This alternate was acceptable to your department at that time, but is not now even listed as an alternate. Could you please advise us why that alignment is no longer considered an alternate?

Since O'Keefe Creek has the uniqueness described above, we believe that the Stream Protection Act requires this department to exercise its authority to prevent any unnecessary destruction of the stream or critical sections thereof. It is also our opinion that the Preliminary Environmental Review for this project is inadequate, in that both potential damage to westslope cutthroat trout populations and discussions of alternate alignments are insufficiently addressed.

Sincerely,

Allen A. Elser

Allen A. Elser
Management Bureau Chief
Fisheries Division

AAE/bjm
cc: H. Johnson
J. Eller

Copy sent to [illegible] 10/17/83

[redacted]

University of Montana
Missoula, Montana 59812

Department of Zoology
(406) 243-5123

November 17, 1982.

[redacted]

Mr. Dennis Workman
Montana Department of Fish, Wildlife and Parks
3309 Brooks
Missoula, Montana 59801

Dear Dennis:

We have completed our electrophoretic analysis of the Salmo collected from O'Keefe Creek, Missoula County, Montana. The protein products of 11 gene loci can be used to electrophoretically differentiate westslope cutthroat trout (Salmo clarki lewisi), rainbow trout (Salmo gairdneri), and Yellowstone cutthroat trout (Salmo clarki bouvieri). Six of these loci differentiate westslope cutthroat trout and rainbow trout, and eight loci differentiate westslope cutthroat and Yellowstone cutthroat trout. These are referred to as diagnostic loci.

In our sample of 51 fish collected October 26, 1982 there was only westslope cutthroat trout genetic material at all of the diagnostic loci. Thus, there is no evidence that O'Keefe Creek does not contain a pure westslope cutthroat trout population. We feel that this is a pure westslope cutthroat trout population based on these findings.

We have examined other Salmo populations in tributaries to the Clark Fork, Blackfoot, and Bitterroot Rivers. Generally, we have found these not to contain genetically pure westslope cutthroat trout populations. Thus, O'Keefe Creek may contain one of the few remaining pure populations of Salmo native to the Clark Fork drainage. This population, therefore, represents a valuable resource in terms of westslope cutthroat trout genetic material.

We have also sent a copy of this letter to George Holton in Helena to inform him of these results.

Sincerely,

Robb F Leary

Robb F. Leary

Dr. Fred W. Allendorf

[redacted]

[redacted]

DEPARTMENT OF HIGHWAYS

TED SCHWINDEN, GOVERNOR

2701 PROSPECT

STATE OF MONTANA

HELENA, MONTANA 59620

File Desmet
INC

October 31, 1983

RE: FF 5-1(1)0
Desmet-Evaro

Al Elser, Administrator
Fisheries Management Division
Department of Fish, Wildlife & Parks
1420 East Sixth Avenue
Helena, MT 59620

Dear Al:

This is in response to your October 13 letter and also to summarize my discussion with you and Art Whitney on October 28. In the design development process of the Desmet-Evaro project, several alternatives were considered, including a split alignment with two lanes west of the stream. These alternatives were presented and discussed at several meetings of the Impact Assessment Group. During the project development phase, the Department of Highways reviewed the project for a possible reduction in scope and design criteria, with the objective, of course, being cost efficiency.

As a result, the original design alternative of a four lane divided roadway with eight-foot shoulders and fourteen-foot median was reduced to a 64/56 foot roadway, overlaying the existing two lanes and adding two lanes. The minimum design criteria of four-foot shoulders and 56-foot roadway width has been applied in the channel change area to reduce encroachment on the valley.

Other constraints on possible alternatives include geology and right-of-way costs. Our geology people have advised against cutting into the adjacent slope further to move the roadway slightly away from the valley, due to unstable conditions. The adjacent landowner to the west of the stream has indicated plans to subdivide, thus acquisition of additional right-of-way would be costly, in addition to the added expense for pipes or structures in/over O'Keefe Creek for that alignment.

A current set of preliminary plans and Notice of Construction, dated October 7, 1983, were sent to DFWP for review. These show the proposed channel change, which utilizes an old channel or abandoned ditch and includes several habitat structures. Paul Garrett, MDOH Biologist, has advised us that channel depth and overhead cover are critical factors for trout survival in

small streams such as O'Keefe Creek. Although we have included these factors in our channel change design, we will be pleased to work constructively with you on developing a channel change which incorporates provisions for habitat improvements and meets your approval as far as construction procedures are concerned. At our recent plan-in-hand meeting, we discussed the need for special emphasis on an extensive revegetation program on this project to speed the recovery of the riparian plant community and provide streambank overhead cover. Again, we would like to work with your department constructively to mitigate impacts on O'Keefe Creek and the trout populations.

We appreciate your concern for a possibly unique and highly significant fish population in O'Keefe Creek. However, we feel there are a number of critical questions concerning the management status of the west slope cutthroat trout population in O'Keefe Creek which should be considered: 1) What other modifications to and uses of the stream have been or are being made by other agencies or individuals which will affect the viability of the existing cutthroat population? 2) Was the genetic sample representative of the entire stream, or only a small portion thereof? 3) Are there natural or artificial barriers to the invasion of the stream reach by trout species (rainbow) which might genetically contaminate the pure cutthroat strain through hybridization, or do rainbow trout now inhabit the reach of concern? 4) Is the existing population of sufficient size, and present stream habitat of sufficient quality and quantity, to reasonably insure the viability of the population for a significant period of time, with or without the proposed channel change?

We are not insensitive to special management needs under unusual circumstances. However, we feel that a carefully designed and constructed channel change, in conjunction with extensive revegetation of the stream banks, will provide the habitat quality you seek and may actually result in a more viable stream environment.

Sincerely,

Don M. Harriott, P.E., Admin.
Engineering Division

DMH/PAC/pz/3a

MONTANA

DEPARTMENT OF

FISH, WILDLIFE AND PARKS

1420 East Sixth Avenue
Helena, MT 59620

November 7, 1983

Mr. Don Harriott, Administrator
Engineering Division
Montana Department of Highways
2701 Prospect Ave.
Helena, MT 59620

Dear Mr. ~~Harriott~~: Don

This correspondence is in response to your Notice of Construction for Project FF 5-1(1)0, DeSmet-Evaro. We have previously requested cross-sections of the alignment to determine the amount of encroachment into O'Keefe Creek or onto its banks. We have also indicated the importance of the existing vegetative cover to the continued well-being of the westslope cutthroat in the reach of the O'Keefe Creek channel which is proposed to be altered. The channel change design in the October 7, 1983, plans do not indicate areas for replacement of vegetation or how the new channel will be constructed into the old channel or abandoned ditch. The type and number of habitat structures in that plan, as well as the typical sections proposed for the channel, are not consistent with state policy to preserve streams in their natural existing state.

Since plans as presently submitted are technically insufficient to allow us to prepare meaningful recommendations to diminish adverse effects on O'Keefe Creek fish and wildlife habitat, we cannot approve the project at this time. Section 87-5-503, MCA, provides that this department "may render aid in preparing adequate plans and specifications" for projects which will adversely affect fish or game habitat. We would like to exercise that provision on this project.

Sincerely,

Allen A. Elser
Management Bureau Chief
Fisheries Division

AAE/sk
cc: Ford/Workman
Paul Garrett
Howard Johnson

MONTANA
DEPARTMENT OF
FISH, WILDLIFE AND PARKS
1420 East 6th Avenue
Helena, Montana 59620
December 21, 1983

RECEIVED
DEC 23 1983
[illegible] OF HIGHWAYS
[illegible] DIVISION

Mr. Don Harriott
Department of Highways
2701 Prospect Avenue
Helena, Montana 59620

Dear Mr. ~~Harriott~~: Don

I have carefully reviewed the enclosed information relating to both the plan design for project DeSmet-Evaro, FF-501(1)0 and the continued well-being of the westslope cutthroat trout in O'Keefe Creek. Our concerns with the channel change proposed on your present plan have been expressed through correspondence sent October 13 and November 7, 1983. These fears have been supported with correspondence of November 11, 1983, from Dr. Fred Allendorf of the University of Montana.

We note that the Engineering Division approved the project design on December 6, 1983, apparently without further considerations to points raised in our correspondence of October 13, 1983. We also note and take exception to the statement made in Mr. Kologi's November 24, 1983, letter to Mr. Howard Johnson, EQC, stating that continued coordination is occurring with this department in designing the 1,400 foot channel change proposed between Sta. 145+ to Sta. 165± (now Sta. 8± to Sta. 22+). We have not been contacted by your agency regarding the channel change design except briefly during a field review of the total project channel encroachment on November 17, 1983.

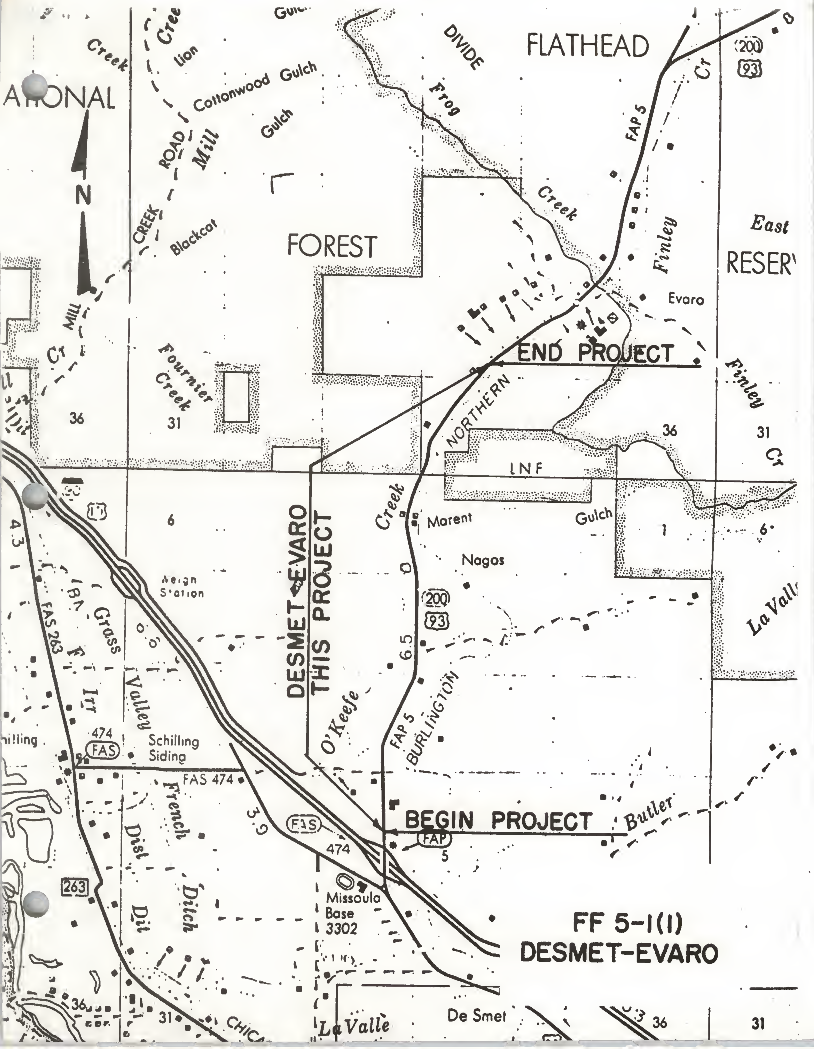
Questions raised in your letter of October 31, 1983, are addressed and answered in the enclosed information. The importance of this population of westslope cutthroat trout cannot be overemphasized.

It is this department's position that the channel change to the extent proposed on plans received on October 7, 1983, are unacceptable. We would like to repeat our October 13, 1983 request that every option for eliminating disruption of the stream be thoroughly studied by the DOH. It is imperative that steps be taken to avoid stream encroachment and channel changes.

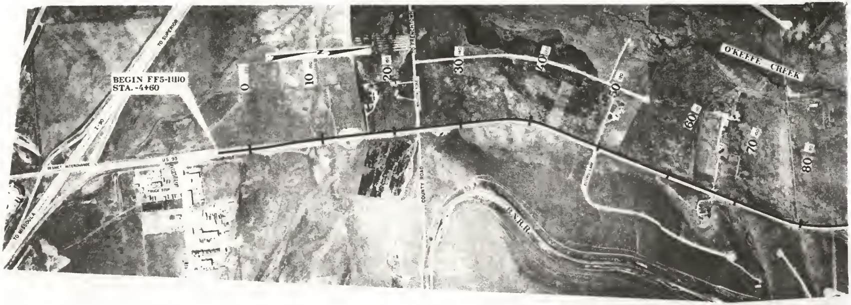
Sincerely,

Allen A. Elser
Management Bureau Chief

AAE/bjm
Encl.
cc: Ford/Workman
Allendorf
H. Johnson


FLATHEAD
DIVIDE
ATIONAL
FOREST
RESER
East
N
Creek
Cree
Lion
Cottonwood Gulch
Mill
Gulch
ROAD
CREEK
Blackcat
MILL
Cr
Frog
Creek
FAP 5
Cr
200
93
Finley
Evaro
END PROJECT
Finley
Cr
NORTHERN
Fournier
Creek
36
31
36
31
LNF
Creek
Marent
Gulch
Nagos
1
6
6
Reign Station
DESMET-EVARO
THIS PROJECT
200
93
6.5
LaValle
Grass
Valley
FAS 263
4.3
F
Irr
O'Keefe
FAP 5
BURLINGTON
Schilling
474
FAS
Schilling Siding
FAS 474
French
BEGIN PROJECT
Butler
3.9
FAS
474
FAP
5
Dist
Ditch
Dit
263
Missoula Base 3302
FF 5-1(1)
DESMET-EVARO
36
31
CHICA
LaValle
De Smet
36
31

SHEET 1 OF 2
DESMET-EVARO
FF 5-1(01)



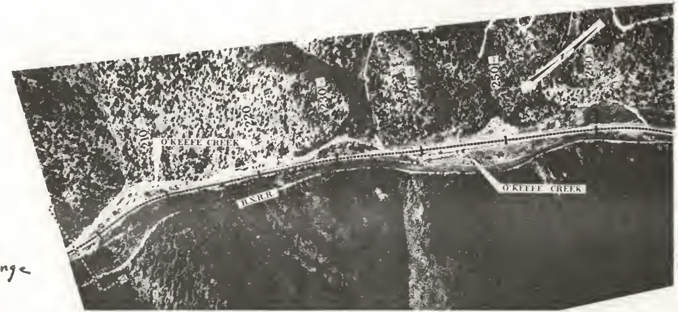
FF5-1110

DESMET-EVARO
MISSOULA COUNTY
5.5 MILES

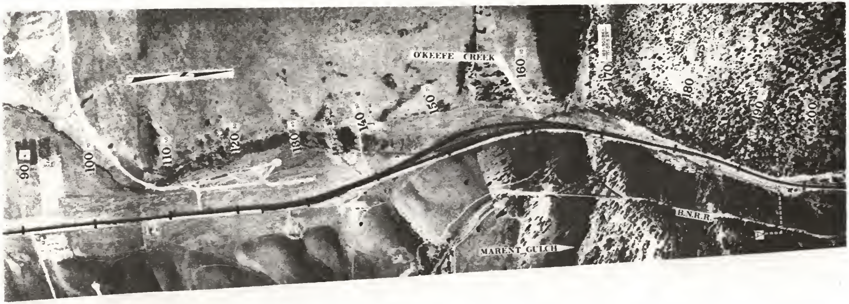
LEGEND

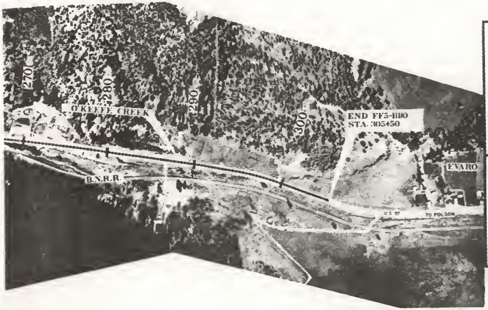
64' ROADWAY
56' ROADWAY
CONNECTION TO P.T.W.
CHANNEL CHANGE

SCALE



Stream crossing / Channel change
alignments from station
0± to 46± (170± to 124±)





TYPICAL ROADWAY CROSS SECTIONS